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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

PIERCE, JEREMY R

ART UNIT PAPER NUMBER

1771

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,336

Applicant(s)

SHEFFER, ARIE

Examiner

Jeremy R. Pierce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-99 is/are pending in the application.
- 4a) Of the above claim(s) 8-14, 16, 17, 22-29 and 48-99 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15, 18-21 and 30-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on September 22, 2003 has been entered. Claim 1 has been amended. Claims 1-99 remain pending with claims 8-14, 16, 17, 22-29, and 48-99 withdrawn from consideration.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-7, 15, 18-21, and 30-47 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant's new limitation that the coating is applied in a "controlled and tunable manner" to increase the weight in a predetermined "tunable" factor is not supported in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-7, 15, 18-21, and 30-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 now recites the coating is applied in a "controlled and tunable manner" to increase the weight in a predetermined "tunable" factor. It is unclear how the coating being applied in a "tunable" manner is any different than applying the coating to a predetermined factor. To apply in a "tunable manner" seems to hint at applying the coating in an optimal fashion. However, no set amount is set forth in the claim as to what the optimal amount may be. Any predetermined factor may be considered a "tunable factor," depending on the desired end use of the product.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 7, 15, 20, 21, 30, 31, and 33-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Giesemann (U.S. Patent No. 5,431,996).

Giesemann discloses a composite article formed from nonwoven natural cellulosic materials coated with a fire resistant water glass (column 2, lines 13-47). With regard to claim 7, Giesemann discloses using recyclable material (column 1, line 63 and Example 5). With regard to claims 20 and 21, Giesemann discloses the thickness of the

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fibrous material as between 0.5 and 1 mm (column 2, line 23). With regard to claims 31 and 33-36, Giesemann discloses a water soluble fire retardant present in the coating an amount of 40 percent by weight (Example 1).

8. Claims 1-6, 15, and 31-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Daigle et al. (U.S. Patent No. 3,961,110).

Daigle et al. disclose a fibrous organic product that is impregnated with a fire-retardant material (Abstract). With regard to claims 4-6, cotton and rayon are possible cellulosic fibers (column 3, lines 7-20). With regard to claim 15, the fibers may be nonwoven (column 3, line 12). With regard to claims 31-36, the coating may contain tetrakis hydroxymethyl phosphonium chloride (Table 1).

9. Claims 1-6, 15, and 18-20 rejected under 35 U.S.C. 102(b) as being anticipated by Stanislawczyk.

Stanislawczyk disclose a nonwoven bonded together with an acrylate polymer (Abstract). With regard to claims 3-6, the fibers may be cotton, cellulosic, or rayon (column 3, lines 27-30). With regard to claims 18-20, the thickness of the nonwoven may be from 1 mm to 25 cm, depending on the desired end use (column 1, lines 25-36).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 37-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gieseemann.

Gieseemann does not disclose the amount of weight increase brought about by the addition of the coating. Adjusting the amount of coating on the fabric would be changing a result effective variable. The flammability and moldability of the composite would be properties that are affected by altering the amount of coating on the fabric. It would have been obvious to one having ordinary skill in the art to vary the amount of coating in the composite of Gieseemann in order to adjust the stiffness and flammability of the material so that the weight increase falls within the claimed ranges, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Response to Arguments

12. Applicant's arguments filed on September 22, 2003 have been fully considered but they are not persuasive.

13. Applicant argues that Gieseemann, Daigle, and Stanislawczyk do not teach applying the coating in a controlled and tunable manner. However, applying the coating in any amount would meet the claim limitation of applying the coating to a "predetermined, tunable factor." Whatever amount is coated onto the fabric can be considered a predetermined, tunable factor. The current claims are directed to a nonwoven fabric, and determining the desired amount of weight gain before coating the fabric is a processing limitation that does not limit the product claim.

14. Applicant argues that it would not be obvious to vary the amount of coating in the composite because Giesemann does not teach how varying the coating can be controlled, so as to be tunable. However, varying the amount of coating in a nonwoven composite is an obvious processing modification in the art of coating fabrics. Adjusting the coating to a specified amount is a matter of adjusting a result effective variable as set forth above.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (571) 272-1479. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-0994.

JRP
JRP

Elizabeth M. Cole
ELIZABETH M. COLE
PRIMARY EXAMINER